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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/687,506

10/16/2003

Louise C. Sengupta

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EXAMINER

LOPEZ, CARLOS N

ART UNIT

PAPER NUMBER

1791

NOTIFICATION DATE

DELIVERY MODE

12/09/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip@akerman.com

Office Action Summary	Application No. 10/687,506	Applicant(s) SENGUPTA ET AL.	
	Examiner CARLOS LOPEZ	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,7-11,24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,7-11,24 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

The previous rejections made on 9/9/08 have been reinstated. Previously, these rejections were withdrawn in view of applicant's presentation to the PTO in the affidavit filed on 6/3/08. The affidavit explicitly stated that subject matter not claimed in the '614, '179, and '895 references was derived by the inventor Sengupta. However, a close look at claims '895 shows that the subject matter added to the pending claims has been claimed by applicant in claim 9 of '895. In view of this discrepancy, it is reasonable to question the reliability of the statements provided in the affidavits.¹

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 7-11, and 24-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhu et al (US 6,404,614). Zhu discloses a method of making electronically tunable dielectric material. The method comprises of providing a layer comprised of tunable dielectric material such as BSTO with two metal oxides such as

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Mg₂SiO₄ and MgO as tunable film of a varactor (See Col. 4, lines 25ff to Col. 6, lines 5ff).

As further noted in Col. 5, lines 22ff, the metal oxides form about 1 to 80% weight of the particles. As for the claimed sintering the mixed particles, it is deemed as being an inherent step done by Zhu in order to ascertain that the tunable materials provide improved sintering characteristics as noted in Col. 6, lines 4ff.

As for claim 7, Zhu does not disclose the addition of more than two metal oxides.

As for claims 8-10, Col. 5, lines 30ff discloses the claimed weight ratios.

As for claim 11, see above noting BSTO, barium strontium titanate.

As for claims 24-25, Col. 5, lines 54ff notes the claimed tenability.

The applied reference has a common inventor with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Claims 1, 3, 7, 11 and 24-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Sengupta (US 6,737,179). Sengupta discloses a method of making electronically tunable dielectric material. The method comprises of providing a film comprised of tunable dielectric material such as BSTO with two metal oxides such as Mg₂SiO₄ and MgO (See Col. 5, lines 21ff). As further noted in bridging paragraph of col.

¹ Applicant is reminded of the duty of good faith and candor noted in MPEP 2001.

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5-6, the metal oxides form about .25 to 80% weight of the particles. As for the claimed sintering see Col. 6, lines 60ff disclosing sintering of the materials.

As for claim 3, Col. 5, lines 50ff discloses the claimed particles sizes.

As for claim 7, Sengupta notes in the abstract that other metals “may” be added thus showing that the dielectric material may consist of essentially two metal oxides.

As for claim 11, see above noting BSTO, barium strontium titanate.

As for claims 24-25, in view that Sengupta’s material has a tenability of from about 5 to 50% at 10 V/micron it would be inherent that it would also have the claimed tunability of at least 25% or 30% at 8V/micron.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Claims 1, 3, 7, 11 and 24-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Chiu et al (US 6,514,895). Chiu discloses a method of making electronically tunable dielectric material. The method comprises of providing tunable ceramic material comprised of tunable dielectric material such as BSTO with at least one metal oxide such as Mg_2SiO_4 and MgO (See Col. 4, lines 15ff). It is noted that the phrase “at least one metal oxide” encompasses two metal oxides as claimed by

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applicant. In regards to the claimed weight percentage of the metal oxides, col. 4, lines 45ff disclose the metal oxides form about 1 to 80% weight of the particles. As for the claimed sintering see Col. 5, lines 40ff disclosing calcining the materials at about 800°C to 1200°C, which is deemed as the claimed sintering of the materials.

As for claim 3, Col. 5, lines 39-41f discloses the claimed particles sizes.

As for claim 7, Chiu notes in Col. 4, lines 55ff that other metals “may” be added thus showing that the dielectric material may consist of essentially two metal oxides.

As for claim 11, see above noting BSTO, barium strontium titanate.

As for claims 24-25, see col. 5 lines 9-1 showing tunability from about 20% to 75% at 8V/micron.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CARLOS LOPEZ whose telephone number is (571)272-1193. The examiner can normally be reached on Mon.-Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571.272.1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Carlos Lopez/

Primary Examiner

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CL